

## REMARKS

[0001] Claims 1-20 are pending. The Office Action mailed April 4, 2007 (hereinafter “Office Action”) rejected Claims 4 and 12 under 35 U.S.C. § 112 as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Office Action rejected Claims 1-20 under 35 U.S.C. § 103(a) as being unpatentable over Van Leuven, U.S. Patent No. 4,184,974 [hereinafter “Van Leuven”] in view of Dodd et al., U.S. Patent No. 6,344,218 [hereinafter “Dodd”].

## AMENDMENTS TO THE CLAIMS

[0002] The Examiner rejects claims 4 and 12 under 35 U.S.C. § 112, Second Paragraph for indefiniteness on the grounds that it is unclear whether the limitation “*a.k.a. propylene glycol*” is merely exemplary in nature or whether it is actually intended to be part of the claim. In response, Applicants delete the phrase “*a.k.a. propylene glycol*” from the claims.

## REJECTION OF CLAIMS 1-20 UNDER 35 U.S.C. §103(a)

[0003] The Office Action rejected Claims 1-20 under 35 U.S.C. § 103(a) as being unpatentable over Van Leuven in view of Dodd. The Applicants respectfully traverse this rejection. The Examiner bears the initial burden of establishing a *prima facie* case of obviousness. MPEP at § 2142. The prior art reference (or references when combined) must teach or suggest all the claim limitations. Id.

[0004] Applicants respectfully submit that the Examiner has not established a *prima facie* case of obviousness. To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Id. Applicants respectfully assert that there is neither a suggestion or motivation in the prior art to modify or to combine the reference teachings and further assert that the prior art references, when combined, do not teach or suggest all the claim limitations.

[0005] Examiner's combination of Van Leuven with Dodd is improper. The prior art must teach or suggest making a modification to the prior art in order to render a claimed invention obvious. *In re Gorden*, 221 USPQ 1125, 1127 (Fed. Cir. 1984). In other words, one must be motivated by the prior art to make the modification necessary to arrive at the present invention. *In re Vaeck*, 947 F.2d 488, 493 (Fed. Cir. 1991). Absent such motivation, a rejection based on a combination of references is unsupported and any rejection based on such a combination must be withdrawn.

[0006] Van Leuven teaches the use of a chelating agent, sodium polypectate, which acts as a strong chelating agent with silver nitrate (Van Leuven at col. 2, line 46-48). According to Van Leuven, only sodium polypectate is used to chelate silver nitrate to produce silver ions in solution. In fact, because Van Leuven considers sodium polypectate to be a strong chelating agent, one skilled in the art would not be motivated to find additional chelating agents. Nowhere in Van Leuven is there a discussion or disclosure of additional chelating agents. In direct contrast, the present application teaches the use of sodium polypectate in combination with ethylenediaminetetraacetic acid (EDTA) to strengthen the chelation bonds. The Federal Circuit has stated "[I]t is impermissible to use the claimed invention as an instruction manual or 'template' to piece together the teachings of the prior art so that the claimed invention is rendered obvious. . . . This court has previously stated that '[o]ne cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.'" *In re Fritch*, 23 U.S.P.Q.2d 1780, 1784 (Fed. Cir. 1992). However, this is exactly what the Examiner has done by combining Van Leuven with Dodd to add an additional chelator.

[0007] Similarly, Dodd does not teach or suggest the addition of more than one chelating agent to strengthen chelation bonds with silver ions. Dodd discloses the use of EDTA alone or as a potentiator in conjunction with other preservatives (Dodd at col. 20, line 11-14). In Dodd, the chelator is used as a preservative to protect against microbial contaminants (Dodd at col. 20, line 9-11). However, in the present application, EDTA is used to strengthen the chelation bonding of the silver ions in the solution not as a preservative to protect against microbial contaminants. See page 4 line 5 of the current application.

[0008] Therefore, the composition in Van Leuven already has a strong chelating agent and an additional chelating agent would not be deemed necessary and thus obvious to one skilled in the art. The EDTA used in Dodd is used for an entirely different purpose than the present application. In short, a skilled artisan would not be motivated to seek an additional chelating agent. The present invention utilizes ethylenediaminetetraacetic acid (EDTA) in combination with sodium polypectate, to improve the strength of the chelation bonds, and thereby enhance its long-term stability.

[0009] Additionally, Applicants traverse the Examiner's rejection for obviousness on the grounds that the references – either individually or in combination – fail to teach or suggest each and every element of the rejected claims. By contrast to the presently claimed invention, Van Leuven does not teach 1,2-propanediol in the range of 3.0 to 5.5% as is presently claimed. Rather, Van Leuven teaches 1,2-propanediol in the range from about 1.2 to 2.5% (See Col. 2, lines 8-9). Similarly, Dodd does not teach or suggest 1,2-propanediol in the range of 3.0 to 5.5% as is claimed and therefore fails to teach or suggest each and every element of the rejected claims. In view of both Van Leuven and Dodd's failure to teach a 1,2-propanediol in the range of 3.0 to 5.5%, Applicants submit that the Examiner has failed to set forth a *prima facie* case for obviousness and respectfully request that the rejection be withdrawn.

[0010] Further, Applicants respectfully submit that the current application provides unexpected results. Van Leuven teaches that sodium polypectate is an extremely sensitive composition (col. 2, line 48-50). In fact, as Van Leuven points out, shampoos containing sodium polypectate are subject to bacterial decomposition and require the addition of preservatives such as propylene glycol and silver nitrate to keep from decomposing (col. 2, line 59-62). The invention in Van Leuven must be bottled in containers opaque to ultraviolet radiation (col. 6, line 51-52) and mixed in a container lined with silver and containing no metal stirrer (col. 7, line 7-8). No such restrictions are placed on the current invention. The present invention has improved long-term stability and extended antimicrobial effectiveness through strengthened chelation bonds with silver ions. This is done through the use of EDTA which allows a smaller amount of sodium polypectate to be used. For example, the present invention discloses the use of as little as 0.005% sodium polypectate, half of the smallest amount taught by Van Leuven. By using an additional chelating

agent to create stronger bonds with the silver ions, Applicants were able to reduce the amount of sodium polypectate required through the use of EDTA.

[0011] None of the prior art references cited by the Examiner teach or suggest the existence of the problem being solved by the present invention, or its solution. Applicants thus provide a way of improving the long-term stability and extending antimicrobial effectiveness. Since there is no recognition in the art that the stability of this type of compound could be improved by the addition of another chelating agent, Applicants' discovery of this source of error and the claimed way of removing the error provides an unexpected improvement in the operation of the chelation process and its stability over time. In view of this unexpected improvement, Applicants maintain that they are entitled to a patent and respectfully request that the Examiner withdraw the present rejection for obviousness.

[0012] The Applicants respectfully assert that Claim 1 is in condition for allowance. Similarly, the Applicants assert that the arguments in favor of Claim 1 are equally applicable to Claims 6, 9 and 14 and are in condition for allowance. Claims 2-5, 7-8, 10-13 and 15-20 depend on Claims 1, 6, 9 and 14 respectively. Therefore, the Applicants respectfully assert that Claims 2-5, 7-8, 10-13 and 15-20 are similarly in condition for allowance because they depend from allowable claims. *See in re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

[0013] Should additional information be required, the Examiner is respectfully asked to notify the Applicants of such need. If any impediments to the prompt allowance of the claims can be resolved by a telephone conversation, the Examiner is respectfully requested to contact the undersigned.

Respectfully submitted,

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